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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
CASCHERA, ANTONIO A

ART UNIT	PAPER NUMBER
2676	

DATE MAILED: 01/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

<table>
<tr><td rowspan="2">Office Action Summary</td><td>Application No.
10/700,376</td><td>Applicant(s)
KAASILA ET AL.</td></tr>
<tr><td>Examiner
Antonio A. Caschera</td><td>Art Unit
2676</td></tr>
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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>06 November 2005</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-29</u> is/are pending in the application.

    4a) Of the above claim(s) <u>19-28</u> is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-3,6-18 and 29</u> is/are rejected.

7)☒ Claim(s) <u>4 and 5</u> is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>03 November 2003</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1.   Applicant's election without traverse of Group I (claims 1-18 and 29) in the paper filed

11/16/2005, is acknowledged.

Priority

2.   Acknowledgment is made of applicant's claim for priority under 35 U.S.C. 365(a).

Specification

3.   Applicant is reminded of the proper language and format for an abstract of the disclosure.

    The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

    The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

    The abstract comprises the phrase, "The invention relates to..." (see line 1 of the abstract) which can be implied and therefore should not be recited. A correction of the abstract is required.

Claim Objections

4.   Claim 15 is objected to because of the following informalities:

      a.   The term, "subpixel-optimizatin" of line 1 of claim 15 should be corrected to,

"subpixel-optimization."

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

5.   Claims 1-3, 6-18 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Aganovic et al. (U.S. Patent 6,105,042) in view of Shetter (U.S. Patent 6,342,890 B1).

In reference to claims 1, 12, 13 and 29, Aganovic et al. discloses a document

management, storage and retrieval operation (see column 1, lines 8-12) for providing digital

content including text and/or images represented by a mark-up language including tags that

dictate the format in which such content is to be displayed and tags that identify images to be

displayed as part of the content (see column 5, lines 13-35 and column 9, lines 52-65). Aganovic

et al. discloses the operation utilizing a host computer and a terminal computer, the host

computer receiving a request from the terminal, the terminal creating a document display

request, making the host computer access and retrieve the requested document from a document

vault (see columns 7-8, lines 66-22). Aganovic et al. specifically discloses the document as

being image data (see column 5, lines 16-19). Aganovic et al. also discloses transforming the

source document to a display document, accommodating the display characteristics of the

requesting terminal computer (see column 8, lines 23-27). Aganovic et al. specifically discloses

performing a compression upon image data so that the source image is scaled down or the

resolution of the source image is reduced by, in one case, a factor of 6.875 (column 9, lines 17-

40). Aganovic et al. discloses the scaled image data placed within a markup language type file

delivery mechanism such as Dynamic HTML and then viewed on the terminal computer using an

Internet Browser (see column 9, lines 41-65, column 10, lines 8-13 and Figure 8). Aganovic et

al. does not explicitly disclose scaling each source image by subpixel optimizing the image,

causing the luminosity associated with each subpixel within a given pixel of the scaled image to

represent the luminosity of the subpixel's color in a portion of the source image that differs for

each subpixel as a function of the subpixel's different position in the given pixel. Shetter

discloses a method and apparatus for improving access to stored blocks of scaled sub-pixel data

producing more legible data on video monitors (see column 1, lines 8-15). Shetter discloses a

scan conversion process which treats RGB subpixel components of pixels as independent

luminous intensity elements (see column 12, lines 62-64). Shetter also discloses performing

such conversion upon scaled image data, determining luminosity values for each subpixel and

then allowing different portions of the scaled image to be mapped into different subpixels (see

columns 12-13, lines 62-7). Shetter discloses that images samples are used to generate the RGB

subpixel intensity values, the red and blue samples being +/- 1/3 of a pixel width in distance from

the green sample, for example as shown in Figure 6 (see column 13, lines 7-16). Note, the

Office interprets that such positioning of image samples of Shetter is functionally equivalent to

Applicant's claim limitation of "subpixel optimizing" as these image samples are dependent

upon a certain location within a target pixel. It would have been obvious to one of ordinary skill

in the art at the time the invention was made to implement the subpixel processing techniques of

Shetter with the image markup scaling and displaying techniques of Aganovic et al. in order to

improve the readability of images and text on video monitors which employ RGB striped

technologies such as LCD monitors (see column 3, lines 2-16 and column 6, lines 24-27 of

Shetter). Further, in reference to claim 29 since Aganovic et al. discloses the use of both host

and terminal computers, the Office interprets that such computers inherently comprise of one or

more processors executing program instructions in a computer readable medium. Further note,

since Aganovic et al. discloses the terminal computer requesting to the host computer, the

request being communicated via a communications link, the Office interprets that such a request

or instructions must be, at the least, temporarily stored in order to communicate them to the host

computer.

In reference to claim 2, Aganovic et al. and Shetter disclose all of the claim limitations as

applied to claim 1 above. Since Shetter discloses the scan conversion process producing a

bitmap image of a character of text (see column 12, lines 49-51), the Office interprets that

Shetter inherently discloses a "string bitmap" since such an element is simply a plurality of scan

converted bitmaps of characters of text in Shetter (further see #407 & 407' of Figure 4).

In reference to claims 3 and 6-8, Aganovic et al. and Shetter disclose all of the claim

limitations as applied to claim 2 above in addition. Shetter discloses performing a weighted scan

conversion process where coverage values representing a percent of a given subpixel that is

covered by a character shape are represented in the bitmap (see columns 16-17, lines 55-25 and

Figure 13). Shetter also discloses defining individual characters with numerous boundary and

sizing values, thereby allowing the bitmaps to be better aligned (see columns 3-4, lines 23-13

and Figure 4). Neither Aganovic et al. not Shetter explicitly disclose the font bitmaps

comprising a size of 8 or 10 pixels per em however, at the time the invention was made, it would

have been obvious to one of ordinary skill in the art to modify Shetter to operate upon only a

certain size of character fonts. Applicant has not disclosed that specifically providing only 8 or

10 pixels per em font sizes provides an advantage, is used for a particular purpose, or solves a

stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's

invention to perform equally well with the scaling and sizing techniques of Shetter because the

exact size of the fonts used is a matter of design choice as preferred by the designer and to which

best suits the application at hand. Therefore, it would have been obvious to one of ordinary skill

in this art to modify Aganovic et al. and Shetter to obtain the invention as specified in claims 3

and 6-8.

In reference to claims 9 and 10, Aganovic et al. and Shetter disclose all of the claim

limitations as applied to claim 1 above in addition, Aganovic et al. discloses the host and

terminal computers communicating via a communication link which is further defined as the

Internet, analog telephone lines or an ISDN network (see column 6, lines 10-16 and #220, 230

and 270 of Figure 3).

In reference to claim 11, Aganovic et al. and Shetter disclose all of the claim limitations

as applied to claim 1 above. Aganovic et al. discloses the scaled image data placed within a

markup language type file delivery mechanism such as Dynamic HTML and then viewed on the

terminal computer using an Internet Browser (see column 9, lines 41-65, column 10, lines 8-13

and Figure 8).

In reference to claim 14, Aganovic et al. and Shetter disclose all of the claim limitations as applied to claim 12 above. Aganovic et al. further discloses the host computer communicating with other servers which control a document vault, to receive "source image" data and then further process the "source image" data to a display document ready for display on the user's terminal computer (see column 7, lines 7-11, column 8, lines 9-26 and #220, "Servers", "Mass Storage", "Communication" of Figure 3). Note, the Office interprets that the host computer functions equivalent to a proxy server in this mode, while the "Servers" attached to the "document vault" act as the "one or more servers" of Applicant's claim.

In reference to claim 15, Aganovic et al. and Shetter disclose all of the claim limitations as applied to claim 12 above. Although Aganovic et al. discloses prior art systems allowing the user to receive original, entire source image data (see column 1, lines 23-53), Aganovic et al. does not explicitly disclose the user terminal computer performing the scaling and further processing upon the source image data. At the time the invention was made, it would have been obvious to one of ordinary skill in the art to allow the user terminal computers of Aganovic et al. more processing responsibilities upon the image data received. Applicant has not disclosed that specifically allowing the user terminal computers to perform scaling and subpixel optimization provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with the server based processing of data of Aganovic et al. because such techniques of Aganovic et al. provide similar results while conserving bandwidth and user computer processing power, allowing for only specific requested data to be processed by lower end client computers. Further, the exact location of such processing of image data is matter of design

choice as preferred by the designer and to which best suits the application at hand. Support for

such a design choice is found in Applicant's specification, page 25, 3rd paragraph where an

"alternate embodiment" is detailed allowing for scaling and other image processing to be

performed in a client or browser comprised computer. Therefore, it would have been obvious to

one of ordinary skill in this art to modify Aganovic et al. to obtain the invention as specified in

claim 15.

In reference to claim 16, Aganovic et al. and Shetter disclose all of the claim limitations

as applied to claim 12 above in addition, Aganovic et al. discloses allowing the user to select a

zoom-in feature, providing the user with an enlargement and increase in details for a specific

region (see column 10, lines 8-11). Aganovic et al. also discloses that the host computer detects

such zoom factor and produces sized data relative to the screen resolution of the user's terminal

computer (see column 10, lines 12-24 and Figures 8 and 9).

In reference to claim 17, Aganovic et al. and Shetter disclose all of the claim limitations

as applied to claim 16 above. Aganovic et al. discloses allowing the user to select a zoom-in

feature, providing the user with an enlargement and increase in details for a specific region (see

column 10, lines 8-11). Aganovic et al. also discloses that the host computer detects such zoom

factor and produces sized data relative to the screen resolution of the user's terminal computer

(see column 10, lines 12-24 and Figures 8 and 9). Since Shetter discloses the scan conversion

process producing a bitmap image of a character of text (see column 12, lines 49-51), the Office

interprets that Shetter inherently discloses a "string bitmap" since such an element is simply a

plurality of scan converted bitmaps of characters of text in Shetter (further see #407 & 407' of

Figure 4).

In reference to claim 18, Aganovic et al. and Shetter disclose all of the claim limitations

as applied to claim 16 above. Aganovic et al. further discloses the host computer communicating

with other servers which control a document vault, to receive "source image" data and then

further process the "source image" data to a display document ready for display on the user's

terminal computer (see column 7, lines 7-11, column 8, lines 9-26 and #220, "Servers", "Mass

Storage", "Communication" of Figure 3). Aganovic et al. also discloses that the host computer

detects such zoom factor and produces sized data relative to the screen resolution of the user's

terminal computer (see column 10, lines 12-24 and Figures 8 and 9).

Allowable Subject Matter

6.   Claims 4 and 5 are objected to as being dependent upon a rejected base claim, but would

be allowable if rewritten in independent form including all of the limitations of the base claim

and any intervening claims.

References Cited

7.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure:

    a.   Makipaa et al. (U.S. Patent 6,556,217 B1)

        • Makipaa et al. discloses a system, method and program for pagination of

          context data based on terminal capabilities.

    b.   Ong et al. (U.S. Patent 5,952,994)

- Ong et al. discloses a method of scaling a portion of an image shown on the display of a PDA.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Antonio Caschera whose telephone number is (571) 272-7781. The examiner can normally be reached Monday-Thursday and alternate Fridays between 7:30 AM and 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella, can be reached at (571) 272-7778.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

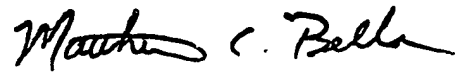**or faxed to:**

571-273-8300 (Central Fax)

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

aac

Me.

1/17/06

MATTHEW C. BELLA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600